June 1, 1992

Final Preliminary Assessment Plus Report
Tri-Star Sports, Inc.
Middletown, Connecticut

Work Order No. 4100-11-34
Work Assignment No. 11-1JZZ
TDD No. 9108-70-AWE
CERCLIS No. CTD052544376

INTRODUCTION

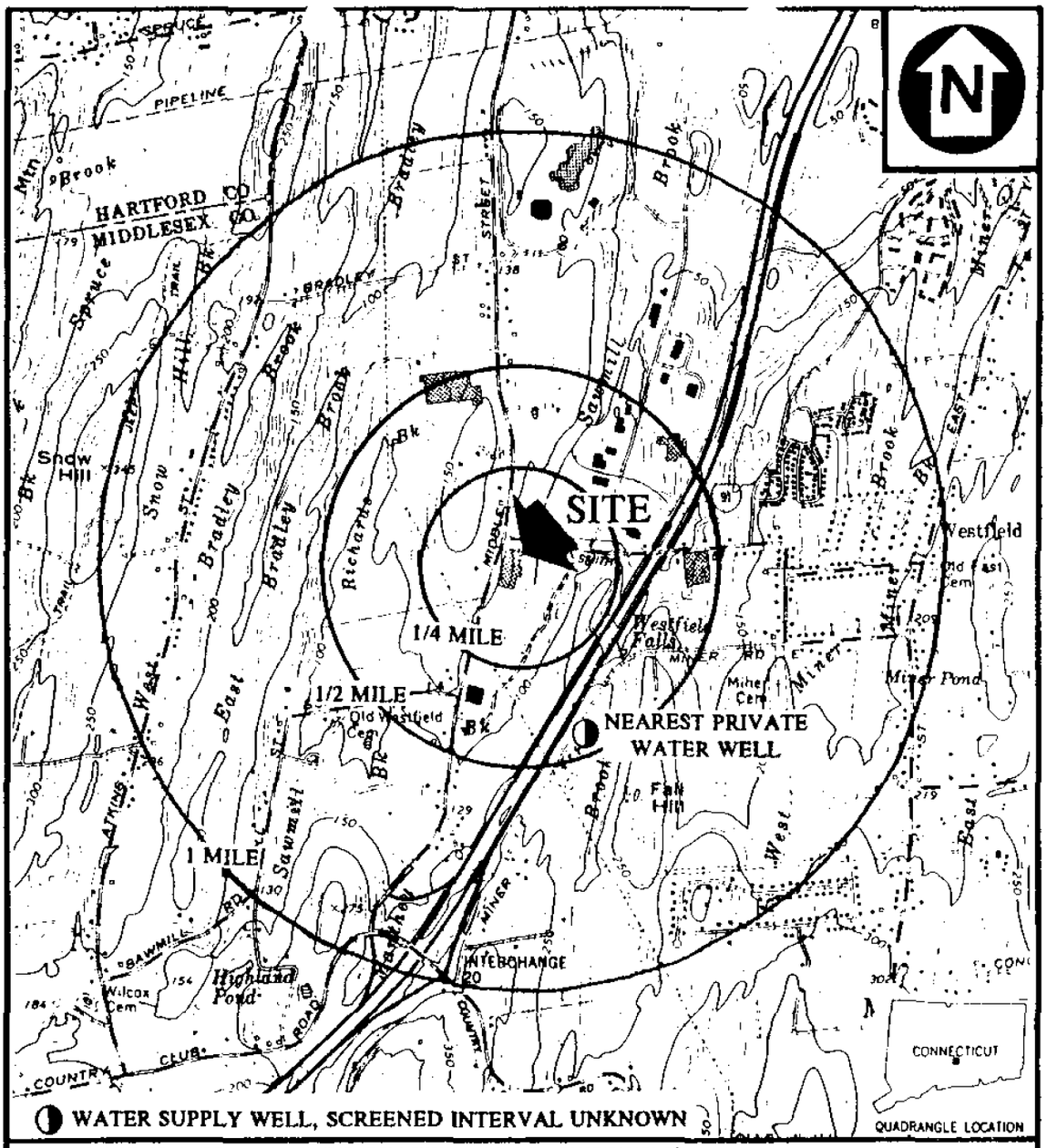
The Roy F. Weston Inc., Alternative Remedial Contracts Strategy (ARCS/Region I) team was requested by the Region I U.S. Environmental Protection Agency (EPA), Waste Management Division, to perform a Preliminary Assessment Plus (PA-PLUS) of the Tri-Star Sports, Inc. (Tri-Star) property in Middletown, Connecticut. Tasks were conducted in accordance with the ARCS contract, the PA-PLUS Scope of Work and Technical Specifications provided by the EPA under Work Assignment No. 11-1JZZ, which was issued to ARCS/Region I on August 27, 1991. This PA-PLUS report was completed as part of EPA's Environmental Priorities Initiative (EPI), a joint project overseen by the Resource Conservation and Recovery Act (RCRA) program and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) program, more commonly known as Superfund.

Background information used in the generation of this report was obtained through file searches conducted at the Connecticut Department of Environmental Protection (CT DEP) and US EPA, telephone interviews with town officials, and individuals knowledgeable of the property history and characteristics, and conversations with Federal, State, and local agencies. Information was also collected during the ARCS/Region I on-site reconnaissance (OSR) which was conducted on January 20, 1992.

This package follows the guidelines developed under Superfund. However, these documents do not necessarily fulfill the requirements of other EPA regulations such as those under the RCRA or other Federal, State or local regulations. The PA-PLUS provides a preliminary screening of facility operations. The EPI presents an integrated RCRA/CERCLA approach to assessing RCRA facilities, utilizing procedures that combine elements of the Superfund Preliminary Assessment (PA) and the RCRA Facility Assessment (RFA). Under the EPI, current and former hazardous waste treatment, storage and disposal facilities regulated by the RCRA program are being evaluated to determine whether corrective action may be warranted. The PA-PLUS is a limited effort and is not intended to supersede more detailed investigations.

SITE DESCRIPTION

Tri-Star is located at 475 Smith Street in Middletown, Middlesex County, Connecticut. The property is located at 41°35'01" N latitude and 72°43'13" W longitude(Figure 1). Tri-Star is a non-active facility formerly involved in recreational alpine ski and equipment manufacturing (CT DEP 1983b). Tri-Star's processes involved ski fabrication, acrylonitrile butadiene-styrene (ABS)



BASE MAP IS A PORTION OF THE FOLLOWING U.S.G.S. QUADRANGLE(S):
MIDDLETOWN, CONNECTICUT 1984 1:24,000

1 MILE 0.5 0 1

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

LOCATION MAP TRI–STAR SPORTS, INC. MIDDLETOWN, CONNECTICUT	ARCS REGION I CONTRACT NO. 68-W9-0018 FIGURE 1

plastic coating and ski finishing (CT DEP 1983b). The ski fabrication process involved core molding, steel and fiberglass grinding, painting, sand blasting, cutting and cleaning (CT DEP 1983b).

The property is bordered to the west by Middle Street and residential properties, to the east by Sawmill Brook and wetlands, to the south by woods and other industrial properties and to the north by Smith Street and an industrial park (Insall 1992a). The Louis Cucia Park is located at the east bank of Sawmill Brook and is used as a children's playground (Insall 1992a).

Tri-Star is located in an industrial and residential section of Middletown and is approximately 13 acres (Wilgan 1991). One 96,000 square foot building is currently located on the property (Tri-Star 1984). This building housed Tri-Star's operations, storage areas and offices when the plant was active (Olin 1984). The original structure of 60,000 square feet was built in 1969-1970 (Olin 1984). Warehouse and storage space additions were made to the south side in 1977 (Insall 1992a; Wilgan 1991).

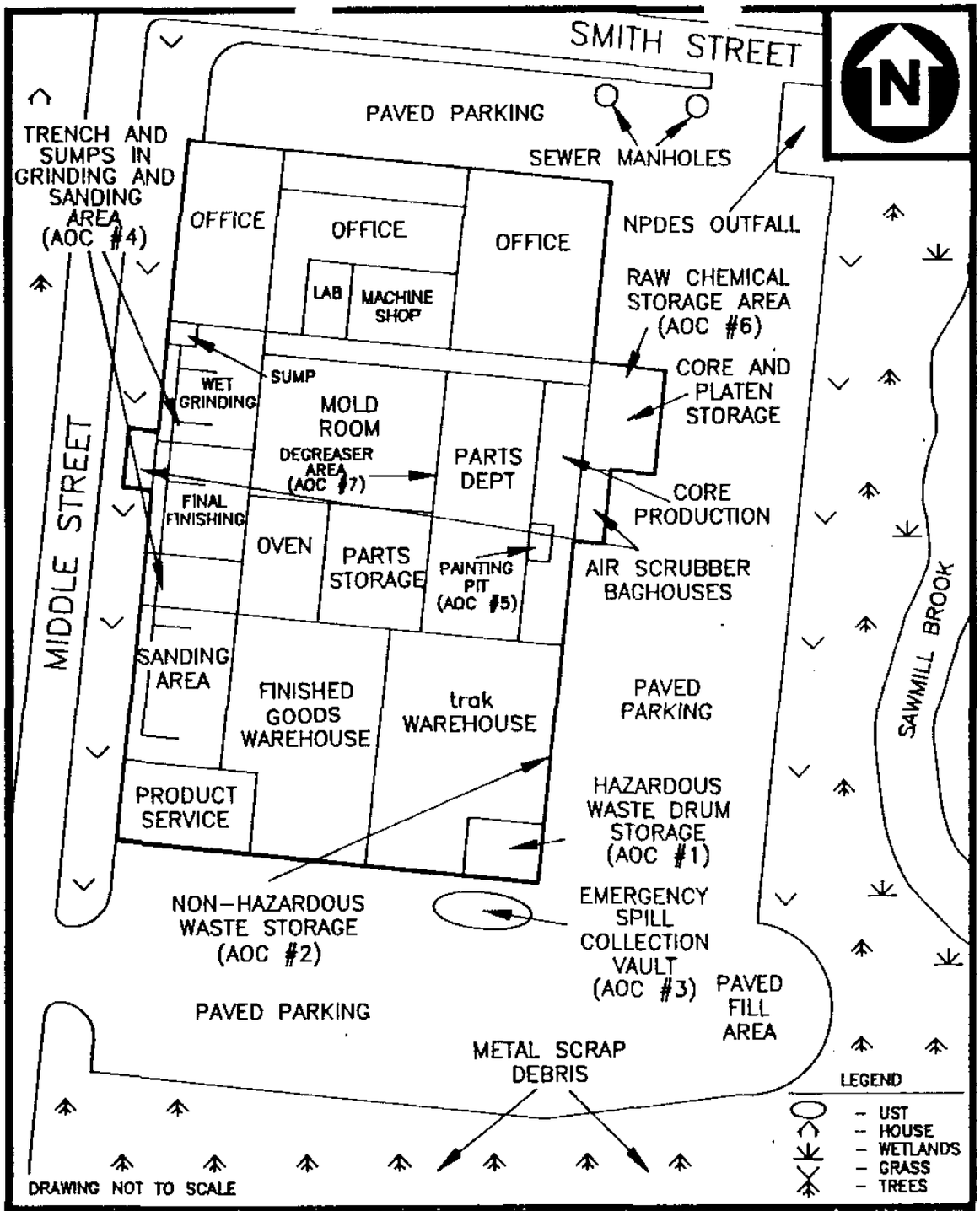
The building and addition are slab on grade, single story, concrete, cinder block and corrugated steel structures heated with natural gas (Wilgan 1991). A small office area is located in a loft at the center of the building (Insall 1992a). This area is carpeted and was not used for manufacturing (Insall 1992a). The main building is divided into manufacturing sections and warehouse space with concrete walls and pre-fabricated dividers separating the painting booths, mold rooms, sanding and grinding areas, inspection areas and product service departments (Insall 1992a; Olin 1984).

Paved parking areas and driveways are in good condition and abut the building to the north, east and south (Insall 1992a; Figure 2). A small grassed and landscaped strip of land runs in a north to south direction between the paved driveway and parking lot to the east of the building and the woods along Sawmill Brook (Insall 1992a).

Vehicular and pedestrian access to the entire property is unrestricted (Insall, 1992a). Access to two large dust collection baghouses, located at the east and west sides of the building, is unrestricted (Insall 1992a). The only fenced area on the property is a small enclosure used to store empty chemical drums when the plant was active (Insall 1992a).

The two baghouses were used for grinding, machining and sanding dust collection from these operations and were CT DEP permitted air pollution control devices (Wilgan 1991). The baghouse dust was disposed of off-site as non-hazardous waste (Insall 1992h).

Tri-Star is approximately 90 feet above mean sea level and topographically located on a 1:5 grade hill sloping to the east (USGS 1984). A paved fill area is located at the southeast side of the property with metal and wood scrap debris visible at the south and east sides of the fill



SITE SKETCH
TRI-STAR SPORTS, INC.
MIDDLETOWN, CONNECTICUT

ARCS REGION I
CONTRACT NO. 68-W9-0018

FIGURE 2

slope (Insall 1992a). Some metal scrap debris is located to the south of the paved driveway in a heavily wooded section of the property (Insall 1992a). No staining or evidence of release was noted in this area during the OSR (Insall 1992a).

A storm sewer line with covered manhole openings is located along the north side of the property five feet south of Smith Street (Insall 1992a). No other storm drains were found on the Tri-Star property (Insall 1992a). The closest catch basin to the plant is located approximately 200 feet northeast of the manufacturing building along Smith Street (Insall 1992a).

A fenced, unbermed, empty drum storage area used to store empty chemical drums when the plant was active is located at the east side of the parking lot (Insall 1992a). This area is approximately 200 square feet in size and located on a paved section of the driveway adjacent to Sawmill Brook (Insall 1992a; Figure 2).

A 5000 gallon, underground, steel emergency spill collection tank was located at the southeast side of the main building, but was removed in 1990 as part of a closure performed on the property in 1990 (Insall 1992a; Figure 2). According to Olin, the tank was never used for waste materials storage (Insall 1992a). No other underground storage tanks are known to have existed on the property when the facility was active (CT DEP 1983b; Insall 1992h).

The Tri-Star building is serviced by municipal water and sewer facilities and was connected to municipal service in the 1960's when the building was constructed (Wilgan 1991). Prior to obtaining a National Pollutant Discharge Elimination System (NPDES) permit for cooling water discharge to Sawmill Brook, the plant discharged approximately 40,000 gallons per day of untreated contact cooling water to the City of Middletown Sanitary Sewer (CT DEP 1974).

According to Olin, a septic field was located on the property, possibly for sanitary waste disposal, but the location and status of this septic field are unknown (Insall 1992h).

Seven Areas of Concern (AOC) were identified during the OSR at Tri-Star. Table 1 summarizes these AOCs and a more detailed description is presented in Appendix A.

Table 1

Areas Of Concern

Area of Concern (AOC)	AOC Description	Start-Up Date/Closure Date	Release Status	References
#1 - Hazardous Waste Drum Storage	This storage area is located at the southeast corner of the building and was used to store drums of hazardous waste.	1980-1990	Low Potential of Release	CT DEP 1991; Insall 1992a
#2 - Non-Hazardous Waste Storage	This storage area was used to store drums of non-hazardous waste.	1980-1990	Low Potential of Release	CT DEP 1991; Insall 1992a
#3 - Emergency Spill Collection Vault	This 5,000 gallon underground tank was used to contain any spills or leaks in the hazardous materials storage area.	1982-1990	Evidence of Release to Ground-water	CT DEP 1991; Insall 1992a
#4 - Trench and Sumps in Grinding and Sanding Area	These trenches and sumps were used for cooling water collection prior to discharge.	1969-1989	Low Potential of Release	CT DEP 1991; Insall 1992a
#5 - Painting Pit	This unit is a 1,000 gallon concrete pit located in the painting area, used for ski painting.	1969-1989	High Potential of Release	CT DEP 1991; Insall 1992a
#6 - Raw Chemical Storage Area	This area located in the Platen Room was used to store 1,1,1-trichloroethane and other raw chemicals.	1969-1989	High Potential of Release	CT DEP 1991; Insall 1992a
#7 - Degreaser Area	This area is located in the Mold Room and was used for parts degreasing in one vapor degreaser.	1969-1989	Low Potential of Release	Insall 1992a

SITE ACTIVITY/HISTORY

The Tri-Star property was purchased in 1970 by the Olin Chemical Group (Olin) and has been used for the manufacture of recreational skis since that time (Wilgan 1991). Tri-Star Sports was formed in 1986 when the Olin Ski Company merged with Trak, Inc.(trak®) to form Tri-Star Sports, Inc. (Wilgan 1991). Land uses prior to 1970 are unknown.

Tri-Star was active from 1970-1989 when the company ceased operations at the Middletown facility and sold their operations to another company at another location (CT DEP 1989; Insall 1992a). A RCRA closure was performed on the drum storage area, non-hazardous waste storage area and spill containment tank in 1990 (CT DEP 1991). The closure was completed on November 19, 1990 when the last shipments of waste from the property were made (CT DEP 1991). Certification of the closure by CT DEP has not been granted (CT DEP 1991; Insall 1992a).

Tri-Star's manufacturing processes involved the use of chlorinated solvents, metals, paints, isocyanate polymers, urethanes and mineral spirits (CT DEP 1983, 1985). Tri-Star used ABS plastics, machining oils, peroxides and sodium hydroxide in their processes (CT DEP 1991).

Virgin materials were stored in the platen storage areas at the east side of the building (Figure 2) when the plant was active (Insall 1992a). Virgin 1,1,1-trichloroethane was stored in a 1,000 gallon aboveground fiberglass storage tank located in the platen storage area (Insall 1992a). This tank lacked any secondary containment structures (Insall 1992a). According to Olin, this tank was rinsed and left in place when Olin ceased operations in 1989 (CT DEP 1991).

Tri-Star performed grinding and machining using both contact and non-contact cooling water (CT DEP 1981). Contact cooling water used in grinding and sanding was collected in an unlined concrete floor trenching system in the sanding and grinding shops and transported to an unlined 200 gallon concrete collection sump located in the grinding room (Insall 1992a). The cooling water was passed through a series of weirs in the trench system to remove and settle large particles prior to collection in the screened sump (Insall 1992a). Approximately 70,000 gallons per day of screened cooling water was then discharged to the sanitary sewer system with no further treatment (CT DEP 1981).

Olin also used non-contact cooling water for wet grinding and machine cooling in their operations (CT DEP 1978). Olin recycled 40,000 gallons per day of non-contact cooling water for use in grinding operations prior to 1978 as a means of reducing discharge volume (CT DEP 1978). As a result of excessive heat generated in the summer months caused by recycling the non-contact cooling water, Olin obtained a NPDES permit to discharge non-contact cooling water to Sawmill Brook (CT DEP 1978a). This eliminated the heat problem (CT DEP 1978a).

The permit was granted for discharges between the months of May and October (CT DEP 1978b). Olin was required to perform a temperature study on Sawmill Brook due to the outfall's high temperature of 110 degrees fahrenheit (CT DEP 1978b).

Olin used a cooling tower located in the grinding shop to evaporate approximately 10,000 gallons per day on non-contact cooling water prior to discharge to the sanitary sewer or Sawmill Brook also as a means of reducing discharge volume (CT DEP 1983b). Use of this cooling tower was discontinued during the summer months due to excessive heat and humidity in the

plant (CT DEP 1983b).

Dust collected in machining operations was drummed in one of two large air scrubber baghouses located to the east and west sides of the manufacturing building and disposed of as non-hazardous waste (CT DEP 1983; Insall 1992a). Tri-Star operated three permitted air pollution control units on the property under CT DEP Air Compliance Pollution Control Equipment Registration Numbers 0104224, 01040225 and 01040229 (Wilgan 1991). Two of these permits were for Tri-Star's baghouse air scrubber systems (Wilgan 1991). The function of the third permit is unknown (Insall 1992a). Olin stated that they did not know what the third permitted unit was (Insall 1992a).

Waste oils and non-regulated wastes were stored adjacent to the permitted hazardous waste storage area in the trak® warehouse (Insall 1992a; Figure 2). Wastes in this area were stored on the concrete slab floor without any secondary containment structures (Insall 1992a). Staining was noted on the concrete slab floor in this area during the OSR (Insall 1992a).

Drummed hazardous wastes were stored in a bermed, concrete hazardous waste storage area in the trak® warehouse prior to off-site disposal (Insall 1992a; Figure 2). The storage area had a maximum capacity of 90 drums (Olin 1986). Wastes stored in this area included spent solvents, laboratory materials, ignitable wastes and waste virgin products (Olin 1986).

The hazardous waste drum storage area was isolated from the trak® warehouse by two cinder block walls and concrete ceiling (Insall 1992a). Access to the storage area was provided by a single entrance in the trak® warehouse (Insall 1992a). The storage area was designed to be explosion proof (CT DEP 1983b).

A floor drain was located in the hazardous waste storage area which leads to a 5000 gallon underground emergency spill collection vault located outside of the building (Insall 1992a). This tank was used for emergency purposes only and was not designed to contain wastes other than spill materials (Insall 1992a). The pipe leading from the hazardous waste storage area to the containment tank was found to be broken in 1989 during a RCRA inspection (CT DEP 1989). At the time of the inspection, the tank was full of water (CT DEP 1989). Olin stated that the water entering the spill collection tank was caused by a high water table in the area (CT DEP 1989).

The tank was removed in 1990 as part of the RCRA closure performed on the property (CT DEP 1991). Information regarding possible soil contamination in the area of the tank grave was not available from Olin at the time of the PA-PLUS Draft Report (Insall 1992h).

Table 2 summarizes wastes generated by Tri-Star, average yearly quantities and source areas. All wastes were removed from the property during closure of the drum storage area in 1990 (CT DEP 1991).

Table 2

Hazardous Waste Quantity

Substance	Quantity/Year	Years of Storage	Years of Disposal	Source Area
Waste Paint, D001	2,310	1969-1989	N/A	Painting Pit
Waste 1,1,1-trichloroethane, F001	824	1969-1989	N/A	Parts Degreasing Area
Waste Lab Pack Materials, D001, F001, U226, D010, D005, D007/D008, D007/F002/ F003	1,320 (24 Drums)	1969-1989	N/A	Laboratory, Manufacturing

Sources: (CT DEP 1988, 1989, 1991)

A total of 15 spill reports are on file in the CT DEP Oil and Chemical Spill files involving incidents on the Tri-Star's property (Wilgan 1991). These records document spills of one quart to five gallons of oil and chlorinated solvents between 1978 and 1988 (Wilgan 1991). Olin had no record of spills on the property (CT DEP 1987c).

Several odor complaints are on file in the CT DEP Air Compliance Unit files regarding the Tri-Star property (Wilgan 1991). Several area residents have complained of phenolic odors and emissions from the Tri-Star property (CT DEP 1987c, 1989). An inspection conducted by CT DEP in 1987 found no air compliance violations (CT DEP 1987c). There were no enforcement actions for air compliance in the CT DEP files (Wilgan 1991).

Olin performed a closure on the property in 1990 (CT DEP 1991). This closure consisted of cleaning and washing the trenches, sump and drum storage areas until rinsewater analysis found concentrations of contaminants to be below regulatory levels (CT DEP 1991; Olin 1986). The closure plan also included the removal of all waste on the property and the removal of the 5,000 gallon underground spill collection sump located to the southeast of the manufacturing building (CT DEP 1991; Olin 1986).

Several drums of D001 weed killers and lab packs with the waste codes D002, D007, D005 and D008 were disposed of by Olin during the 1990 closure (CT DEP 1991). Olin was unaware that any wastes with these waste codes (D005, D007, D008) were generated on the property (Insall 1992h). None of these waste codes (D005, D007, D008) appear on any of the facility annual report summaries found on file at CT DEP (Wilgan 1991). Olin's grinding sludge was disposed of as non-hazardous waste (CT DEP 1983). Additionally, Olin was unaware of any weed killers

used on the property (Insall 1992h). No other information regarding the use of weed killers on the property is on record (Wilgan 1991).

Tri-Star was operating a Part A storage facility under RCRA until the RCRA closure was completed at the plant in 1990.

The certified closure is pending approval by CT DEP (CT DEP 1991). Tri-Star holds an EPA identification No. CTD052544376 as listed in CERCLIS (CT DEP 1991).

Tri-Star holds an NPDES permit (No. 0101583) for the disposal of 40,000 gallons per day of non-contact cooling water to Sawmill Brook (CT DEP 1978) and a State Discharge Permit (No. DEP/WCU 083-070) for the discharge of 70,000 gallons per day of contact cooling water to the Middletown Sanitary Sewer System (CT DEP 1986).

Table 3 summarizes additional regulatory activity, violations and orders issued to Tri-Star since 1975.

Table 3

Regulatory Activity

Activity	Date	Description
Order No. 1988 to Olin from CT DEP WCU.	November 1, 1975	Order to abate pollution and redirect discharge to Middletown Sanitary Sewer from Mattabassett District.
CT DEP Hearing on NPDES Permit Application	October 5, 1978	Hearing on Olin's permit application for the discharge of 40,000 gallons per day of non-contact cooling water to Sawmill Brook.
NPDES Permit Approval	December 27, 1978	Olin issued an NPDES permit for the discharge of 40,000 gallons per day of non-contact cooling water to Sawmill Brook between May and October.
Notification of Hazardous Waste Activity	August 8, 1980	Olin submitted first notice of hazardous waste activity to U.S. EPA.
Part A Permit Application	October 8, 1981	Olin submitted RCRA Part A permit application.
Olin submitted a Closure Plan to CT DEP	July 9, 1986	Olin submitted a Hazardous Waste Storage Facility Final Closure Plan to CT DEP outlining decontamination and closure procedures at Tri-Star Sports in Middletown.
Olin submitted a Form I, Negative Declaration to CT DEP.	July 9, 1986	Olin submitted a Form I Negative Declaration under the Connecticut Transfer Act certifying that no discharges of hazardous materials have occurred on the property.
Notice of Violation No. 305	April 27, 1987	Notice of Violation issued to Tri-Star regarding personnel training and container management.
Tri-Star ceased operations	May 25, 1989	Tri-Star ceased manufacturing activities at 475 Smith Street, Middletown, Connecticut.
Closure Completed	November 19, 1990	RCRA Closure of Tri-Star Sports Hazardous Waste Storage Area, Spill Tank and trenches completed.

ENVIRONMENTAL SETTING

Tri-Star is located geographically in the Central Connecticut Lowlands Region. The surficial geology of the area is described as glaciofluvial meltwater deposits consisting of sand, silt and gravel (USGS, 1967). Glacial till is also present in the area and consists of non-sorted stony till and clay (USGS 1967). The depth to the till in the area is unknown. Fine grained fluvial deposits are located along Sawmill Brook at the western border of the property (Insall 1992a).

The bedrock in the area is Portland Arkose (USGS 1959). Portland Arkose is described as

coarse to fine arkose with interbedded conglomerate, shale and feldspathic sandstone (USGS 1959). Two faults are located near the property running in a northeast to southwest direction approximately 700 feet east and 2,300 feet west of the property respectively (USGS 1959). Depth to bedrock in the area is unknown.

The property is located in the Sawmill Brook Subregional Basin of the Mattabassett Regional Basin. The Mattabassett Regional Basin is an estimated 110 square miles in size (CT DEP, 1984). According to the Groundwater Classification of Connecticut Map, groundwater beneath the property is classified as GB/GA, indicating those waters which are not suitable for direct human consumption without treatment due to waste discharges, spills or leaks of chemicals or land use impacts (CT DEP 1987a). The State's goal is to achieve and maintain Class GA water quality conditions (CT DEP 1987a).

Sawmill Brook has a surface water classification of A, indicating waters known or presumed to meet water quality criteria for potential drinking water supply, recreational uses, fish and wildlife habitats and for agricultural and industrial supply (CT DEP 1987a). The Mattabassett River has a state water quality classification of B/A indicating those waters which may not meet water quality criteria for uses such as drinking water supply, recreational uses, fish and wildlife habitats, agricultural uses and industrial supply (CT DEP 1987a). All types of discharges in a Class B/A area are strictly prohibited (CT DEP 1987a).

Groundwater is estimated at 10 feet beneath the ground surface based on topographic map surface water elevations (USGS 1984). Groundwater is used for drinking and industrial water supply within a four mile radius of the property (CT DEP 1982a, 1984; Insall 1992a)

Six municipal water supply wells are located within a four mile radius of Tri-Star and supply drinking water to 4,136 people (EPA 1992). None of these wells are part of blended drinking water systems (CT DEP 1984; Insall 1992d). An estimated 10,380 people are served drinking water by private wells within four miles of Tri-Star (CT DED 1991; Insall 1992b-g).

Table 4 lists populations served by public groundwater supply sources within four miles of Tri-Star. Estimated populations supplied drinking water by private water wells are summarized in Table 5 and illustrated on Figure 3. Municipal water supplies, direction from the property and estimated population served by wells are summarized in Table 6 and shown on Figure 3.

Table 4

Public Groundwater Supply Sources Within Four Miles of Tri-Star

Distance/Direction from Tri-Star	Source Name	Location of Source	Approximate Population Served	Source Type
2.5 SE	Lorraine Terrace No. 1	Middletown	44	Unknown
2.6 NW	Elton Well No. 1	Berlin	1,942	Unknown
2.6 NW	Elton Well No. 2	Berlin	1,942	Unknown
2.75 SE	Sylvan Ridge No. 1	Middlefield	84	Unknown
2.75 SE	Sylvan Ridge No. 2	Middlefield	84	Unknown
3.75 SE	Sugarloaf Terrace No. 2	Middlefield	40	Unknown

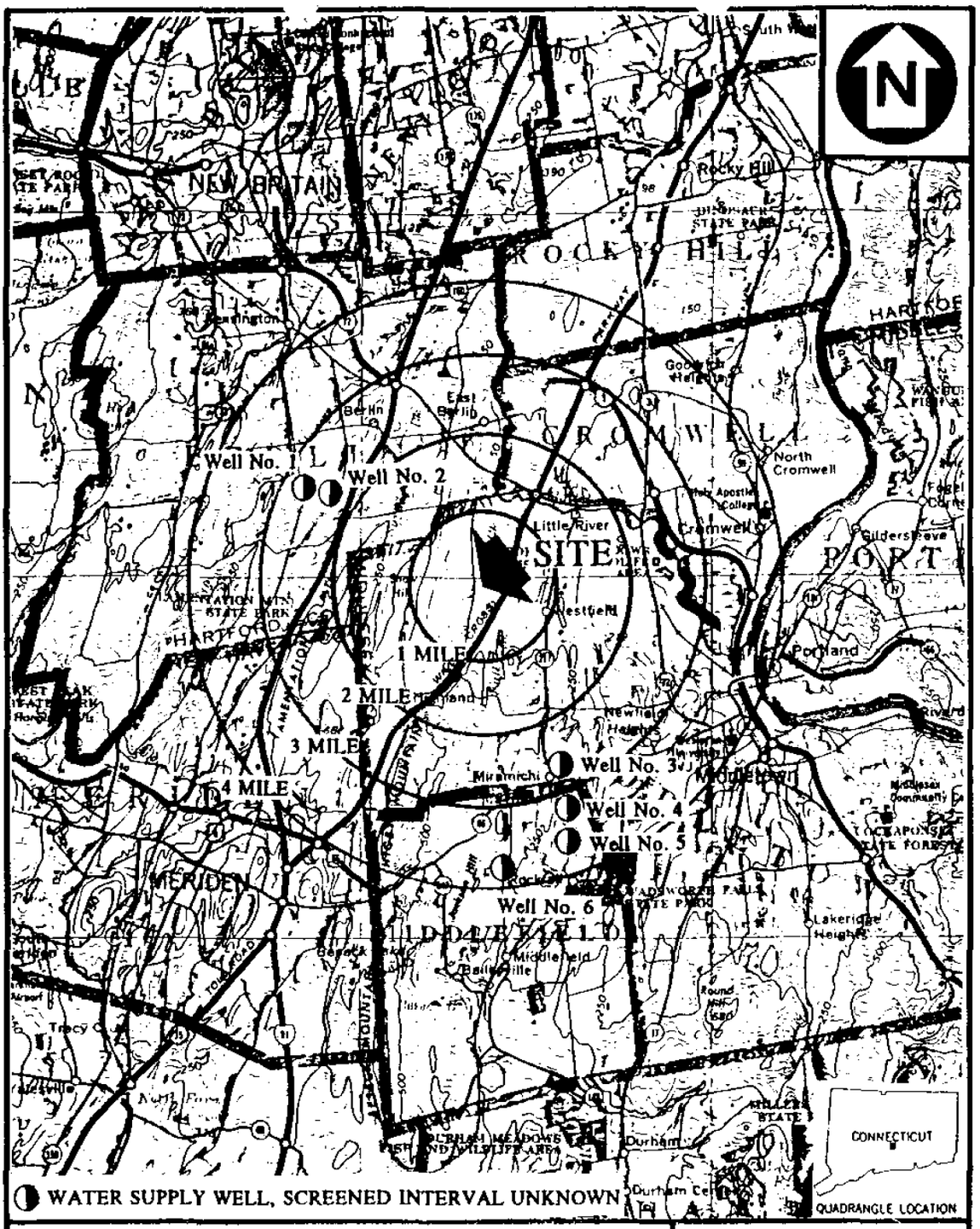
Sources: (EPA 1992; CT DEP 1982)

Table 5

Estimated Population Served By Private Wells Within Four Miles of Tri-Star

Radial Distance Ring	Population Served By Private Wells	Population Served By Municipal Well
0.00 - 0.25	0	0
0.25 - 0.50	18	0
0.50 - 1.00	123	0
1.00 - 2.00	1,617	0
2.00 - 3.00	3,430	4,096
3.00 - 4.00	5,192	40
TOTALS:	10,380	4,136

Sources: (CT DED 1991; Insall 1992b-f; CT DEP 1990)



FOUR MILE RADIUS
TRI–STAR SPORTS, INC.
MIDDLETOWN, CONNECTICUT

ARCS REGION I
CONTRACT NO. 68-W9-0018

FIGURE 3

Table 6

Approximate Population Within Four Miles of Tri-Star

Radial Distance From Tri-Star (miles)	Approximate Population
0.00 - 0.25	5
0.25 - 0.50	65
0.50 - 1.00	2,944
1.00 - 2.00	9,043
2.00 - 3.00	14,950
3.00 - 4.00	21,223
TOTAL:	48,230

Source: (CT DED 1991)

The nearest private drinking water wells are located approximately one half mile southeast of the property and supply water to several residential houses along Miner Road (CT DEP 1984; USGS 1984). The Middletown Water Department public water supply does not service the portion of Middletown west or south of the West Street line (CT DEP 1984). All of the properties within one half mile of the property are served by public water supply sources (CT DEP 1984).

The most Probable Point of Entry (PPE) of contaminants to surface water is the NPDES outfall approximately 200 feet east of the manufacturing building into Sawmill Brook (Insall 1992a). Sawmill Brook converges with the Mattabassett River approximately one and one half miles downstream from Tri-Star (USGS 1984). The Mattabassett River converges with the Connecticut River approximately seven and one half miles downstream of Tri-Star (USGS 1984). The end of the 15 mile migration pathway is located on the Connecticut River near the City of Middletown, Connecticut (USGS 1984).

The Connecticut River at the Thompsonville, CT gauging station had a 1989 mean flow rate of 9651 cubic feet per second (cfs) - (USGS 1989). No published flow rate data exists for Sawmill brook or the Mattabassett River along the surface water migration pathway (USGS 1989). The Sawmill brook is typical of a small to moderate size stream with an estimated flow rate of 300 cfs (USGS 1989). The Mattabassett River is typical of a moderate sized river with an estimated flow rate of 2250 cfs (USGS 1989).

None of the surface waters located along the 15 mile migration pathway downstream from Tri-

Star are used for drinking water supply. However, Sawmill Brook is listed in the U.S. EPA Integrated Environmental Management Database (IEM) as a potential surface water supply source (CT DEP 1982b; EPA 1992). The closest fishery to the property is the Mattabassett River approximately 1.5 miles downstream from Tri-Star as listed in the 1991 State of Connecticut Anglers Guide published by the CT DEP (CT DEP 1992). The Mattabassett River has an estimated flow rate 2250 cfs (USGS 1989). The Connecticut River is also listed as a fishery and has an estimated flow rate of 9651 cfs (USGS 1989).

Wetlands are located along Sawmill Brook on the eastern side of the Tri-Star property at the PPE (Insall 1992a; USGS 1984). The Cromwell Meadows Wildlife Area is located approximately four miles downstream from the PPE along the surface water migration pathway (EPA 1992; USGS 1984). The Cromwell Meadows Wildlife Area is approximately 484 acres in size (EPA 1992). These are the only sensitive environments located along the 15 mile migration pathway (EPA 1992; USGS 1984).

The sensitive environment with the lowest flow rate characteristics is the wetlands along Sawmill Brook approximately 0.1 miles to the east of the Tri-Star property (USGS 1984).

There were no endangered, threatened or species of special concern listed in the Connecticut Natural Diversity Database (NDDB) located within a one mile radius of Tri-Star (CT DEP 1992). Four NDDB points are located within one to two miles, 10 NDDB points are located within two to three miles and 11 NDDB points are located within three to four miles of Tri-Star (CT DEP 1992; EPA 1992). These species are listed in Appendix B (CT DEP 1992).

Tri-Star is an inactive facility and does not currently employ anyone on a regular basis (CT DEP 1990). When Tri-Star was active, the plant employed approximately 205 people on 2 shifts (CT DEP 1983). An estimated 5 people live within 200 feet of Tri-Star (Gurney 1992; Insall 1992a; USGS 1984). No schools or day-care facilities could be identified within 200 feet of the property (Insall 1992a).

An estimated 48,230 people live within four miles of Tri-Star (CT DED 1991). The closest regularly occupied building is 300 feet north of Smith Street and is the industrial office space in the Smith Street Industrial Park (Insall 1992a). Table 6 summarizes approximate populations located within each distance ring within four miles of Tri-Star.

SUMMARY

Tri-Star is located at 475 Smith Street in Middletown, Middlesex County, Connecticut. The property is located in a residential and industrial zoned section of Middletown. Land use beyond the local area is characterized by both industrial and residential activity. The Tri-Star property is approximately 13 acres. Two interconnected buildings are currently on the property occupying approximately 96,000 square feet. The property is bordered to the east by Sawmill Brook and to the west by residential properties.

Since 1970, the property has been used for recreational alpine ski manufacture under the Olin Ski Company from 1970 to 1986 and Tri-Star Sports, Inc. a subsidiary of Olin Chemicals Group, Inc. from 1986 to 1989. Tri-Star's processes involved ski-fabrication, ABS plastic coating, painting and grinding. The property is currently owned by the Olin Chemicals Group and is not longer active.

Tri-Star is no longer active and ceased manufacturing on May 25, 1989. A RCRA closure was performed on the hazardous waste storage area, spill containment tanks and floor trenches in the manufacturing building in 1990. The last hazardous waste on the property was removed on November 19,1990. This closure is pending approval by CT DEP.

The Tri-Star property is served by public water and sewer facilities and discharged approximately 70,000 gallons per day of screened contact cooling water into the City of Middletown sanitary sewer when the facility was active. Tri-Star also discharged 40,000 gallons per day of non-contact cooling water used in air compressors and core molding machines into Sawmill Brook between May and October under an NPDES permit.

Tri-Star's processes involved the use of chlorinated solvents, oils, paints, urethanes, plastics and metals. Waste materials were stored in two locations on the property prior to treatment and off-site disposal. Drummed hazardous wastes were stored in the hazardous waste storage area located in the trak® warehouse. Non-hazardous wastes were stored in an uncontained area adjacent to the hazardous waste storage area in the trak® warehouse.

Virgin materials were stored in a centralized storage area in the platen storage area. Virgin 1,1,1-trichloroethane was stored in a 1,000 gallon, unbermed fiberglass storage tank located in this area.

Several complaints have been made regarding odors and emissions from Tri-Star property by area residents. Tri-Star has not been issued any orders or violations regarding air emissions by the CT DEP.

An estimated 14,516 people are served drinking water by public and private drinking water wells within four miles of Tri-Star. The nearest fishery to Tri-Star is the Mattabassett River approximately one and one half miles downstream of the property. Sawmill Brook is listed as a potential drinking water supply in the US EPA IEM database.

Wetlands are located on the Tri-Star property along the west bank of Sawmill Brook. The Cromwell Meadows Wildlife Area is located approximately four miles downstream of Tri-Star and is approximately 484 acres in size. No threatened, endangered or species of special concern are located within one mile of Tri-Star as listed in the CT DEP Natural Diversity Database. A total of 25 NDDB points are located within four miles of Tri-Star and listed in Appendix B.

Seven AOC's were identified during the OSR and are described in detail in Appendix A. Start up dates for some of the AOC's were unavailable from Olin and are thus listed as 1969, the start-up date of the facility (Insall 1992a).

At this time, EPA recommends that Tri-Star be deferred to the RCRA program for further evaluation.

Submitted by:

John H. Insall
Task Manager

Joseph D. Mastone
Site Manager

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APPENDIX A

AOC DESCRIPTION OUTLINE

AOC DESCRIPTION OUTLINE

AOC Number:	#1
AOC Name:	Hazardous Waste Drum Storage
AOC Status:	Low Potential of Release (Insall 1992a).
AOC Description:	The Hazardous Waste Drum Storage Area is located at the southeast side of the manufacturing building and is constructed of poured concrete with cinder block walls (Insall 1992). The drum storage area is approximately 800 square feet and has a maximum capacity of approximately 90 drums of hazardous waste (Olin 1984, 1986). No waste was stored in this storage area during the OSR (Insall 1992a). This area has undergone a RCRA closure pending approval by CT DEP (CT DEP 1991).
AOC Start-Up Date:	1969 (Insall 1992a)
AOC Closure Date:	1990 (CT DEP 1991)
Wastes Managed at AOC:	Wastes managed at the AOC include flammable wastes, waste solvents and lab pack materials (CT DEP 1991; Insall 1992a). The hazardous waste drum storage area had a maximum capacity of approximately 90 - 55 gallon drums (Olin 1986). Tri-Star generated approximately 2,310 gallons of waste paint and 824 gallons of waste 1,1,1-trichloroethane per year in their operations, all of which was managed by this AOC (CT DEP 1988).
Release Controls:	This storage area is constructed of poured concrete and cinder blocks and has a ramped and bermed entrance from the eastern side of the trak® warehouse (Insall 1992a). When the storage area was active, the area had a floor drain which lead to an underground spill collection tank south of the manufacturing building (CT DEP 1991).
Release History:	No release history was found for this AOC (Wilgan 1991).

AOC DESCRIPTION OUTLINE

AOC Number:	#2
AOC Name:	Non Hazardous Waste Storage Area
AOC Status:	Low Potential of Release (Insall 1992a).
AOC Description:	This area was used to store oils and non-regulated wastes and was located adjacent to the hazardous waste drum storage area in the trak® warehouse (Insall 1992a). This area occupied an unbermed, uncontained section of the trak® warehouse (Insall 1992a). Minor concrete staining was noted in this area during the OSR (Insall 1992a).
AOC Start-Up Date:	1969 (Insall 1992).
AOC Closure Date:	1990 (CT DEP 1991).
Wastes Managed at AOC:	Spent oil wastes, non-regulated wastes (Insall 1992a). The quantity of waste oils and unregulated wastes generated by Tri-Star Sports is unknown (Insall 1992a).
Release Controls:	No release controls exist for this AOC (Insall 1992a).
Release History:	No release history was found for this AOC (Insall, 1992a).

AOC DESCRIPTION OUTLINE

AOC Number:	#3
AOC Name:	Emergency Spill Collection Vault
AOC Status:	Evidence of Release to Groundwater (Insall 1992a).
AOC Description:	This vault was a 5,000 gallon concrete vault located south of the manufacturing building used as an emergency spill collection sump (Insall 1992a). The vault was never used for waste storage. The vault was removed from the property in 1990 as part of a RCRA closure performed on the property (CT DEP 1991).
AOC Start-Up Date:	1969 (Insall 1992a)
AOC Closure Date:	1990 (CT DEP 1991).
Wastes Managed at AOC:	Emergency Spill Materials from hazardous waste storage area (Insall 1992a). When full, this sump could manage 5,000 gallons of wastes from the hazardous waste storage area including waste paints and 1,1,1-trichloroethane (CT DEP 1988). This sump was never used for routine waste storage and only used for emergency spill collection (Insall 1992a).
Release Controls:	No release controls exist for this AOC.
Release History:	During a RCRA inspection in 1989, the tank was found to be half full with water and leaking at the fill pipe connection due to a high water table in the area (CT DEP 1989).

AOC DESCRIPTION OUTLINE

AOC Number:	#4
AOC Name:	Trench and Sump in Grinding Area
AOC Status:	Low Potential of Release (Insall 1992a).
AOC Description:	This unit consists of a series of poured concrete trenches and weirs in the grinding and sanding areas used for contact cooling wastewater collection (Insall 1992a). The trenches are a total of approximately 240 feet in length and about one square foot in cross sectional area (Insall 1992a). The sump is approximately 200 gallons capacity and discharged into a Middletown Sanitary Sewer connection (Insall 1992a). The trenches and sump are unlined (Insall 1992a).
AOC Start-Up Date:	1969 (Insall 1992a).
AOC Closure Date:	1989 (CT DEP 1991).
Wastes Managed at AOC:	Contact cooling water, metal shavings and grinding sludge (Insall, 1992a). Tri-Star disposed of approximately 70,000 gallons of contact cooling water per day, all of which was managed by this AOC (Insall 1992a). The quantity of metal shavings and grinding dust generated by Tri-Star per day is unknown.
Release Controls:	No release controls exist for this AOC (Insall, 1992a).
Release History:	This sump has a history of clogging and overflowing (CT DEP 1989). One release of contact cooling water was documented in the CT DEP Oil and Chemical Spill files from this AOC (Wilgan 1991).

AOC DESCRIPTION OUTLINE

AOC Number:	#5
AOC Name:	Painting Pit
AOC Status:	High Potential of Release (Insall 1992a).
AOC Description:	This unit is an unlined pit used in painting operations in the Core Production Area (Insall 1992a). This pit ia approximately 50 cubic feet in size (Insall 1992a). The pit was used for ski painting in the core production area when the plant was active (Insall 1992a).
AOC Start-Up Date:	Early 1969 (Insall 1992a).
AOC Closure Date:	1989 (Insall, 1992a)
Wastes Managed at AOC:	Paint Wastes (Insall 1992a). Tri-Star generated approximately 2,310 gallons of waste paint per year, which was handled by this AOC (CT DEP 1988). The painting pit had a capacity of 1,000 gallons (Olin 1986).
Release Controls:	No secondary containment exists for this unit (Insall, 1992a).
Release History:	No release history was found for this pit (Wilgan 1991).

AOC DESCRIPTION OUTLINE

AOC Number:	#6
AOC Name:	Raw Chemical Storage Area
AOC Status:	High Potential of Release (Insall 1992a).
AOC Description:	This unit is a raw chemical storage area located in the core and platen production and storage area (Insall 1992a). Virgin 1,1,1-trichloroethane was stored in a 1,000 gallon unbermed fiberglass tank in this area. Spills from this tank are likely to have been released from the building through a crack in the base of an external wall in this area (Insall 1992a). Other raw chemicals were also stored in this area when the plant was active (Insall 1992a).
AOC Start-Up Date:	1969 (Insall 1992a).
AOC Closure Date:	1989 (CT DEP 1991).
Wastes Managed at AOC:	None (Insall 1992a). Raw chemicals were stored in this AOC (Insall 1992a). One thousand gallons of virgin 1,1,1-trichloroethane was stored in this area (CT DEP 1988).
Release Controls:	No release controls exist for this area (Insall 1992a).
Release History:	No release history was found for this AOC (Wilgan 1991).

AOC DESCRIPTION OUTLINE

AOC Number:	#7
AOC Name:	Degreaser Area
AOC Status:	Low Potential of Release (Insall 1992a).
AOC Description:	Tri-Star operated one vapor degreaser in their operations from 1969 to 1989 when the facility was closed (Insall 1992a). The degreaser was located in the mold room and lacked any secondary containment structures to prevent the release of spilled materials to other portions of the building (Insall 1992a). The degreaser was located in an interior area of the plant and would be unlikely to release contaminants to the environment (Insall 1992a). No floor drains, trenches or sumps are located in this area which would provide a route for hazardous materials release (Insall 1992a).
AOC Start-Up Date:	1969 (Insall 1992a).
AOC Closure Date:	1989 (CT DEP 1991).
Wastes Managed at AOC:	Approximately 824 gallons of waste 1,1,1-trichloroethane were generated and managed by this AOC per year when the facility was active (Insall 1992a).
Release Controls:	No release controls exist for this area (Insall 1992a).
Release History:	No release history was found for this AOC (Wilgan 1991).

APPENDIX B

CONNECTICUT NATURAL DIVERSITY DATABASE

NDDB/SRC SITE REQUEST REPORT

NDDB REFERENCE NO.: 50998 SRC SITE LAT/LON: 41 35 01, 73 43 13
TOWN NAME: MIDDLETOWN QUAD. NAME, NO.: MIDDLETOWN (67)
DATE NDDB DATA BASE QUERIED: March 06, 1992
NO. OF NDDB POINTS WITHIN FOUR MILES OF SITE: 25

Tri-State Sports

NO NDDB POINTS WITHIN .25 MILE RADIUS OF SRC SITE

NO NDDB POINTS BETWEEN .25 AND .5 MILE RADIUS OF SRC SITE

NO NDDB POINTS BETWEEN .5 AND 1 MILE RADIUS OF SRC SITE

4 NDDB POINT(S) BETWEEN 1 AND 2 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATUS*
YELLOW CORYDALIS	CORYDALIS FLAVULA	1989-05-05	T
SMALL-FLOWERED AGRIMONY	AGRIMONIA PARVIFLORA	1979-07-04	SC
EASTERN COUGAR	FELIS CONCOLOR COUGUAR	1973	SC LE
GREEN DRAGON	ARISAEMA DRACONTIUM	1990	SC

10 NDDB POINT(S) BETWEEN 2 AND 3 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATUS*
WALLRUE SPLEENWORT	ASPLENIUM RUTA-MURARIA	1947-11-22	T
	SUBACIDIC ROCKY SUMMIT/OUTCROP	1984	
	POOR FEN	1981-08-31	
GREEN-WINGED TEAL	ANAS CRECCA	1974	
BLUE-WINGED TEAL	ANAS DISCORS	1974	T
	FRESHWATER TIDAL MARSH	1983	
AMERICAN BITTERN	BOTAURUS LENTIGINOSUS	1974	E
YELLOW CORYDALIS	CORYDALIS FLAVULA	1990-08-25	T
SLENDER WALKER	POMATIOPSIS LAPIDARIA	1989-07-19	SSC
VIOLET WOOD-SORREL	OXALIS VIOLACEA	1981-05-26	SC

11 NDDB POINT(S) BETWEEN 3 AND 4 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATUS*
HYBRID -- SCOTT'S SPLEENWORT	ASPLENOSORUS X EBENO DES	1915-10-31	SS
GREEN DRAGON	ARISAEMA DRACONTIUM	1988	SC
DWARF BULRUSH	LIPOCARPHA MICRANTHA	ND	E
YELLOW RAIL	COTURNICOPS NOVEBORACENSIS	1912	
ATLANTIC STURGEON	AC PENSER OXYRYNCHUS	1980'S	T
VIRGINIA RAIL	RALLUS LIMICOLA	1983	*
LEAST BITTERN	IXOBRYCHUS EXILIS	1983	T
COPPERHEAD	AGKISTRODON CONTORTRIX	1986	
	SUBACIDIC ROCKY SUMMIT/OUTCROP	1982	
	FLOODPLAIN FOREST	1979	
VARIEGATED HORSETAIL	EQUISETUM VARIEGATUM	1990-05-17	SC

*DATE = DATE OF LAST OBSERVATION
*STATUS (FIRST ENTRY) = STATE STATUS
*STATUS (SECOND ENTRY) = FEDERAL STATUS